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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,642	03/02/2004	Steven E. Muentert	7784-000672CPA	3076

27572 7590 04/06/2006

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EXAMINER

RATCLIFFE, LUKE D

ART UNIT PAPER NUMBER

3662

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/791,642	Applicant(s) MUENTER ET AL.	
	Examiner Luke D. Ratcliffe	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 6 is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bateman (3937575) in view of Wetteborn (5949530) and Amazajerdian (5317376).

Referring to **claims 1, 2, and 5** Bateman shows a relaxation oscillator (column 3 lines 13-35), and an optical subsystem (figure 1). Wetteborn shows a control subsystem (figure 1 Ref 10), a first portion of optical energy that is reflected by the target back to the optical subsystem (figure 1), and using the time of flight to extrapolate a distance to the target (columns 2 and 3). It would have been obvious modify Bateman in view of Wetteborn because technology and hardware in Wetteborn would allow the same control that instead of using electrical pulses would use optical light pulses in order to give feedback into the control system. However neither Wetteborn nor Bateman show a control subsystem that would adjust the controlled oscillation rate of the oscillator or the period of the oscillator.

Amazajerdian shows a control feedback unit that controls the frequency of an oscillator and because the frequency is the inverse of the period it would be obvious to

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control either the frequency or the period of the oscillations because this ensures that the transmission signal is accurate and the received reflection will be the correct signal.

Referring to claim 4 **Wetteborn** shows a control subsystem that comprises a photodetector and a controller (figure 1 Ref 23 and 10 respectively).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bateman (3937575) in view of Wetteborn (5949530) and Amazajerdian (5317376) as applied to claim 1 above, and further in view of Meinzer (5267016).

Meinzer shows an optical subsystem that comprises an optical beam splitter (column 11 lines 9-30). It would have been obvious to an optical subsystem that comprises an optical beam splitter because this allows a portion of light to go to the photodetector that is then connected to the control subsystem that will control the firing of the laser. A beam splitter is very common and the addition of a beam splitter in this instance adds no new or unexpected results.

Allowable Subject Matter

Claim 6 is allowed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Farmer (5748295) and Geardin (4928152) show a similar combination of a returned and expelled optical signal also known as a standing wave and uses this standing wave to generate information about the range and velocity of an object.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke D. Ratcliffe whose telephone number is 571-272-3110. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LDR

LDR



THOMAS H. TARCZA
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TECHNOLOGY CENTER 3600